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10/087,119	03/01/2002	Andrew J. Boast	396/360	4214

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EXAMINER

OCAMPO, MARIANNE S

ART UNIT

PAPER NUMBER

1723

DATE MAILED: 10/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/087,119

Applicant(s)

BOAST ET AL.

Examiner

Marianne S. Ocampo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) filed 5/23/02 6) ☐ Other: 8/9/02

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 – 14, 15 – 30 and 35 - 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Cain (GB 2,171,024).

3. Concerning claim 1, Cain discloses an automatic transmission sump filter assembly in fluid communication with the inlet of an automatic transmission fluid pump comprising:

(a) a filter housing (5, 7) having a filter chamber, an inlet (not shown) in fluid communication with the filter chamber, and an outlet (connected to outlet tube 24 in communication with filtrate chamber 8) in fluid communication with the filter chamber and the inlet (8) of the automatic transmission fluid pump;

(b) filtration material (34 or 44) forming an (tubular/cylindrical) envelope (the term “envelope” has been broadly defined by the examiner to mean *an enclosing or shell*);

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(c) a plastic filter element (10, 30, 40), removably disposed in the filter chamber, having at least one edge of the filtration material envelope (34, 44) embedded therein and at least one shoulder (27, 26); and

(d) at least one sealing member (12) disposed in the filter element shoulder (27) wherein the sealing member is in sealing engagement with the filter housing (5) and the filter element (10), as in figs. 1 – 4 and pages 1 - 3.

4. Regarding claim 2, Cain has disclosed the limitations of claim 1 above. Cain further discloses comprising at least one plastic rib (32 or 42) attached to the plastic filter element (10, 30 or 40) and supporting the filtration material (34, 44), as in fig. 3.

5. With respect to claim 3, Cain has disclosed the limitations of claim 2 above. Cain also discloses the plastic filter element (10, 30) further comprising an end wall member (23, 38, 24) attached to the at least one plastic rib (32) with a portion of the filtration material (34) embedded into the end wall member (23, 38), as in fig. 3.

6. With regards to claim 4, Cain has disclosed the limitations of claim 3 above. Cain further discloses the sealing member (12) comprising at least one O-ring (12) and the shoulder (27 being adapted to retain the at least one O-ring, as in figs. 1 & 4.

7. Regarding claim 5, Cain has disclosed the limitations of claim 4 above. Cain further discloses at least a portion of the end wall member comprising a sealing member retaining shoulder (25) adapted to receive at least one sealing member or O-ring (14) and disposed about the periphery of the end wall and further comprising at least one sealing member or O-ring (14) in sealing engagement with the filter housing (5, 7) and the filter element (10), as in figs. 1 & 4.

8. Concerning claim 6, Cain has disclosed the limitations of claim 5 above. Cain also discloses the filtration material comprising polyester, as in page 3, lines 66 – 68.

9. Regarding claim 7, Cain has disclosed the limitations of claim 1 above. Cain also discloses the plastic filter element (10) further comprising an end wall member (24, 23, 38) with a portion of the filtration material (34) embedded into the end wall member (at 23, 38), as in fig. 4.

10. With respect to claim 8, the limitation “the retaining shoulder” lacks proper antecedent basis. Cain has disclosed the limitations of claim 7 above. Cain further discloses the sealing member (12) comprising at least one O-ring (12) and a retaining shoulder (27) being adapted to receive the at least one O-ring (12), as in fig. 4.

11. With regards to claim 9, Cain has disclosed the limitations of claim 8 above. Cain also discloses the filtration material comprising polyester, as in page 3, lines 66 – 68.

12. Concerning claim 10, Cain has disclosed the limitations of claim 9 above. Cain also discloses the end wall (24, 23) comprising a sealing member retaining shoulder (25) adapted to receive at least one sealing member and disposed about the periphery of the end wall (24), and further comprising at least one sealing member (14) disposed in the end wall retaining shoulder (25) wherein the sealing member (14) is in sealing engagement with the filter housing (5, at wall 7) and the filter element (10), as in figs. 1 & 4.

13. With regards to claim 11, Cain has disclosed the limitations of claim 1 above. Cain also discloses the filtration material comprising polyester, as in page 3, lines 66 – 68.

14. With respect to claim 12, Cain has disclosed the limitations of claim 11 above. Cain further discloses the plastic filter element (10, 30) further comprising at least one plastic rib (32) and an end wall member (38, 23) attached to the at least one plastic rib (32) with a portion of the filtration material (34) embedded into the end wall member (38, 23), as in figs. 3 - 4.

15. Regarding claim 13, Cain has disclosed the limitations of claim 12 above. Cain also discloses the sealing member comprising at least one O-ring (12) and the shoulder (27) being adapted to receive the at least one O-ring (12), as in figs. 1 & 4.

16. Concerning claim 14, Cain has disclosed the limitations of claim 13 above. Cain also discloses the end wall member (24, 23) comprising a sealing member retaining shoulder (25) adapted to receive at least one sealing member and disposed about the periphery of the end wall (24) and further comprising at least one sealing member (14) disposed in the end wall retaining shoulder (25) wherein the sealing member (14) is in sealing engagement with the filter housing (5) and the filter element (10), as in fig. 4.

17. With respect to claim 15, Cain disclose a sump filter assembly in fluid communication with the inlet (8) of a pump comprising:

(a) a housing (5) having a chamber, an inlet (above the fluid 6, not shown) in fluid communication with the chamber, an outlet (bounded by wall 7 and outlet tube 24) in fluid communication with the chamber thereby defining a fluid flow path between the inlet and outlet through the chamber, and an access hole (on the right hand side of housing 5, in the vicinity of snap ring 4); and

(b) a filter element (10) disposed through the housing access hole, the filter element comprising:

(i) a plastic member having a frame (30, 36, 32, 38, 20) and at least one sealing member retaining shoulder (27),

(ii) filtration material (34), with a portion of the filtration material embedded in the plastic frame (38, 20, 36),

(iii) at least one plastic rib (32, 36, 38) attached to the plastic member (30, 20) and supporting the filtration material (34), and

(iv) at least one sealing member (12) disposed against the sealing member retaining shoulder (27) and sealingly engaging the housing wall (7) in the housing chamber, whereby the filter element (10, 30) is disposed in the fluid flow path between the housing inlet and outlet to thereby filter sump fluid, as in figs. 1 – 4 and pages 2 – 5.

18. Concerning claim 16, Cain has disclosed the limitations of claim 15 above. Cain also discloses a portion of the filtration material (34) being embedded into the at least one plastic rib (32, 38, 36), as in fig. 4.

19. With regards to claim 17, Cain has disclosed the limitations of claim 16 above. Cain further discloses the sealing member comprising at least one O-ring (12) and the shoulder (27) being adapted to receive the at least one O-ring (12), as in figs. 1 & 4.

20. With respect to claim 18, Cain has disclosed the limitations of claim 17 above. Cain also discloses the filter element (10) further comprising an end wall (23, 24) attached to the at least one plastic rib (38, 32) integral with the plastic member (20, 30, 38) whereby the end wall member (24, when in assembly with 20, 26) extending through the housing access hole, as in figs. 1 & 4.

21. Concerning claim 19, Cain has disclosed the limitations of claim 18 above. Cain also discloses a portion of the filtration material being embedded into the end wall member (24, 23, 38), as in figs. 3 – 4.

22. Regarding claim 20, Cain has disclosed the limitations of claim 19 above. Cain further discloses the plastic member (30, 36), the end wall member (24) and at least one plastic rib (32) being monolithically molded (formed as an unitary/single piece), as in figs. 3 – 4 and pages 2 – 4.

23. With respect to claim 21, Cain has disclosed the limitations of claim 20 above. Cain also discloses the filter assembly comprising a plurality of plastic ribs (32) extending between the plastic member (36) and the end wall member (23, 24) whereby a rib cage support structure for the filtration material (34) is formed, as in figs. 3 – 4.

24. With regards to claim 22, Cain has disclosed the limitations of claim 21 above. Cain also discloses the filtration material comprising polyester, as in page 3, lines 66 – 68.

25. Concerning claim 23, Cain has disclosed the limitations of claim 22 above. Cain further discloses the end wall member (23, 24) comprising a sealing member retaining shoulder (25) adapted to receive at least one sealing member and disposed about the periphery of the end wall and further comprising at least one sealing member (14) disposed in the end wall retaining

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shoulder (25) wherein the sealing member (14) is in sealing engagement with the filter housing (at 7, 5) and the filter element (10), as in fig. 1.

26. With respect to claim 24, Cain has disclosed the limitations of claim 23 above. Cain further discloses the at least one sealing member (14) being at least one O-ring or gasket member, as in fig. 4 and page 2.

27. Regarding claim 25, Cain has disclosed the limitations of claim 15 above. Cain further discloses the filter element (10) being accessible from the housing access hole, removably disposed in the housing (5) and further comprising an end wall member (24, 23, 38) attached to the at least one plastic rib (32) with a portion of the filtration material (34) embedded into the end wall (38, 23) member, as in figs. 3 - 4.

28. With regards to claim 26, Cain has disclosed the limitations of claim 25 above. Cain also discloses a portion of the filtration material (34) being embedded into at least one plastic rib (32, 36), and the plastic member (30, 36), at least one plastic rib (32) and the end wall member (24, 23, 38) being monolithically molded plastic, as in figs. 3 & 4 and in page 3.

29. Concerning claim 27, Cain has disclosed the limitations of claim 26 above. Cain further discloses the end wall member (24, 23) comprising a sealing member retaining shoulder (25) adapted to receive at least one sealing member and disposed about the periphery of the end

wall and further comprising at least one sealing member (14) disposed in the end wall retaining shoulder (25) wherein the sealing member (14) is in sealing engagement with the filter housing (7, 5) and the filter element (10), as in figs. 1 & 4.

30. Regarding claim 28, Cain has disclosed the limitations of claim 27 above. Cain further discloses the filtration material comprising polyester, as in page 3, lines 66 – 68.

31. With regards to claim 29, Cain has disclosed the limitations of claim 28 above. Cain also discloses the at least one sealing member (14) comprising at least one O-ring, as in fig. 4 & page 2.

32. With respect to claim 30, Cain has disclosed the limitations of claim 15 above. Cain discloses the at least one sealing member (12) comprising at least one O-ring, as in fig. 4 & page 2.

33. Concerning claim 35, Cain has disclosed the limitations of claim 15 above. Cain further discloses the filtration material (34) comprising polyester, as in page 3.

34. With regards to claim 36, Cain has disclosed the limitations of claim 35 above. Cain discloses the at least one sealing member (12) comprising at least one O-ring, as in fig. 4 & page 2.

35. Regarding claim 37, Cain has disclosed the limitations of claim 36 above. Cain further discloses the filter element comprising an end wall member (24, 23, 38) attached to the at least one plastic rib (32) with a portion of the filtration material (34) embedded into the end wall (38, 23), as in fig. 4.

36. With respect to claim 38, Cain has disclosed the limitations of claim 37 above. Cain further discloses a portion of the filtration material (34) being embedded into at least one plastic rib (32) and the plastic member (36, 30), at least one plastic rib (32) and the end wall member (38, 23, 24) being monolithically molded plastic, as in fig. 4 and page 3.

37. Concerning claim 39, Cain has disclosed the limitations of claim 38 above. Cain further discloses the end wall member (24, 23) comprising an O-ring retaining shoulder (25) adapted to receive at least one O-ring and disposed about the periphery of the end wall and further comprising at least one O-ring (14) disposed in the end wall retaining shoulder (25) wherein the O-ring (14) is in sealing engagement with the filter housing (7, 5) and the filter element (10), as in figs. 1& 4 and page 2.

38. Regarding claim 40, Cain has disclosed the limitations of claim 15 above. Cain also discloses the housing (5) being a monolithic (i.e. one-piece) housing, as in fig. 1.

Claim Rejections - 35 USC § 103

39. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

40. Claims 31 – 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cain (GB 024) in view of Leason (US 4828,694).

41. With respect to claim 31, Cain has disclosed the limitations of claim 30 above. Cain also discloses the filter element further comprising an end wall member (24, 23, 38) attached to the at least one plastic rib (32) with a portion of the filtration material (34) embedded into the end wall member (38), but fails to disclose the filter element being sonically welded to the housing access hole.

42. Leason teaches a sump filter assembly comprising a housing (20, 40, 22) and a filter element (11, 12), wherein the housing having an access hole (41, defined by tube 50) and the filter element (11, 12) being sonically welded to the housing access hole (50, 41), as in col. 4, lines 55 – 64.

It is considered obvious to one of ordinary skill in the art at the time of the invention to modify the filter assembly of Cain, by adding the embodiment taught by Leason (i.e. sonically welding the filter element to the housing) in order to provide a permanent sealing engagement between the filter element and the housing, thereby eliminating the need for an extra O-ring for forming the sealing and providing a more effective and better leak-proof engagement between the filter element and the housing. It is also considered an obvious engineering choice to make the filter element non-detachable (i.e. permanently sealed/attached) to the housing, if the user is intending to make and use the filter assembly only one time (i.e. one-time usage/disposable). If the entire filter assembly is disposable, an easier assembly and disassembly thereof from a transmission fluid line would be an advantage.

43. With regards to claim 32, Cain as modified by Leason, has disclosed the limitations of claim 31 above. Cain also discloses a portion of the filtration material (34) is embedded into at least one plastic rib (32), and the plastic member (36, 30), at least one plastic rib (32), and the end wall member (38, 23, 24) being monolithically molded plastic, as in figs. 3 – 4 & page 3. It is considered obvious to one of ordinary skill in the art to modify the filter assembly of Cain, as modified by Leason, by further adding the embodiment taught by Cain, for a simpler and unitary construction of the filter element. Furthermore, having the entire filter element formed of a plastic material would create an improved filter element which can withstand corrosion and physically more stable than those formed of filter paper.

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44. Concerning claim 33, Cain, as modified by Leason, has disclosed the limitations of claim 32 above. Cain further discloses the filtration material comprising polyester, as in page 3, lines 66 – 68. It is considered obvious to one of ordinary skill in the art to modify the filter assembly of Cain, as modified by Leason, by further adding the embodiment taught by Cain, in order to provide a filter element having a material of construction which is more physically stable than its paper counterparts and able to retain particles of 80 microns and larger, as in page 3 of Cain.

45. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cain and Leason, as applied to claim 32 above, and further in view of Cain (US 4,826,598).

46. With respect to claim 34, Cain, as modified by Leason, has disclosed the limitations of claim 32 above. Cain, as modified by Leason, fails to teach the filtration material comprising nylon, stainless steel, or cellulose. Cain (598) teaches a filter element for use in similar sump filter assembly taught by Cain and Leason, wherein the filter element of Cain (598) has a filtration material comprising nylon, as in col. 4. It is considered obvious to one of ordinary skill in the art at the time of the invention to modify the material of construction of the filter element of Cain as modified by Leason, by adding the material taught by Cain (598), in order to provide an alternative filtration material which is as effective in retaining coarser/larger particles

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contained in transmission fluids and provide a material has good wet strength (see properties of nylon given in Hawley's Condensed Chemical Dictionary, pages 811 – 812).

Conclusion

47. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patents 4,640,771 (Whalen et al.), 5,494,575 (Kitajima et al.) and 4,402,827 (Joseph).

48. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marianne S. Ocampo whose telephone number is (703) 305-1039. The examiner can normally be reached on Mondays to Fridays from 8:30 A.M. to 4:30 P.M..

49. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker can be reached on (703) 308-0457. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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50. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Mso
M.S.O.

Joseph D. Dudge
JOSEPH DUDGE
PRIMARY EXAMINER